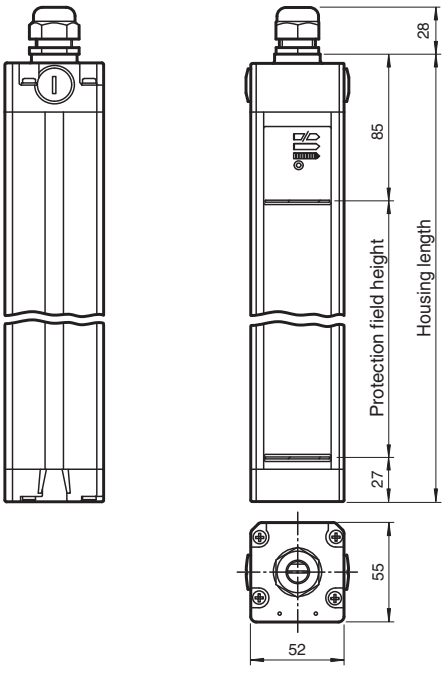
Safety light curtain

SLC30-900

- Sensing range up to 15 m
- Resolution 30 mm (hand protection)
- Protective field height up to 1800 mm
- Self-monitoring (type 4 according to IEC/EN 61496-1)
- Master/Slave detection, Plug and Play
- Start/Restart disable
- Degree of protection IP67
- Integrated function display
- Pre-fault indication
- Safety outputs OSSD in potential-separated semiconductor design or with monitored, compelled connection NC-contacts
- Optional with relay monitor (Option 129)

Dimensions



Technical Data

System components	
Emitter	SLC30-900-T
Receiver	SLC30-900-R
General specifications	
Effective detection range	0.2 ... 15 m
Light source	IRED
Light type	modulated infrared light
LED risk group labelling	exempt group

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Technical Data

Tests		IEC/EN 61496
Safety type according to IEC/EN 61496		4
Width of protected area		0.2 ... 15 m
Protection field height		900 mm
Number of beams		48
Operating mode		can be selected with or without start/restart disable
Optical resolution		30 mm
Angle of divergence		< 5 °
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
Performance level (PL)		PL e
Category		Cat. 4
Mission Time (T_M)		20 a
PFH_d		1.03 E-8
Type		4
Indicators/operating means		
Operation indicator		7-segment display in emitter
Diagnostics indicator		7-segment display in receiver
Function indicator		in receiver: LED red: OSSD off LED green: OSSD on LED yellow: Protected area free, system start-ready
Pre-fault indicator		LED orange
Control elements		switch for start/restart disable, transmission coding
Electrical specifications		
Operating voltage	U_B	24 V DC (-30 %/+25 %)
No-load supply current	I_0	Emitter: ≤ 100 mA receiver: ≤ 150 mA
Protection class		III
Input		
Activation current		approx. 10 mA
Activation time		0.03 ... 1 s
Test input		Reset-input for system test
Function input		Start release
Output		
Safety output		2 separated fail safe semiconductor outputs
Signal output		1 PNP each, max. 100 mA for start readiness and OSSD status
Switching voltage		Operating voltage -2 V
Switching current		max. 0.5 A
Response time		18 ms
Conformity		
Functional safety		ISO 13849-1
Product standard		EN 61496-1 ; IEC 61496-2
Approvals and certificates		
CE conformity		CE
UL approval		cULus Listed
CCC approval		CCC approval / marking not required for products rated ≤36 V
TÜV approval		TÜV
Ambient conditions		
Ambient temperature		0 ... 55 °C (32 ... 131 °F)
Storage temperature		-25 ... 70 °C (-13 ... 158 °F)
Relative humidity		max. 95 %, not condensing
Mechanical specifications		
Housing length L		1010 mm

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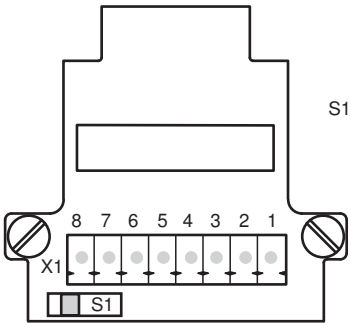
Technical Data

Degree of protection	IP67
Connection	M20 cable gland , terminal compartment with screw terminals, lead cross-section max. 1.5 mm²
Connection options	Further electrical connection options on request: Connector M12, 8-pin Connector DIN 43 651 Hirschmann, 6-pin+PE Connector M26x11 Hirschmann, 11-pin+PE
Material	
Housing	extruded aluminum profile, RAL 1021 (yellow) coated
Optical face	Plastic pane
Mass	per 3000 g

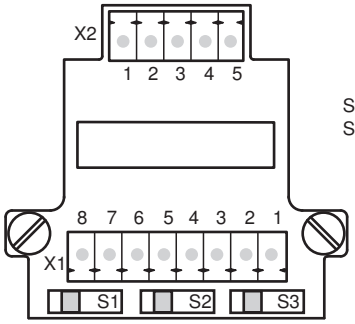
Connection

Emitter:



S1: Beam coding

Receiver:

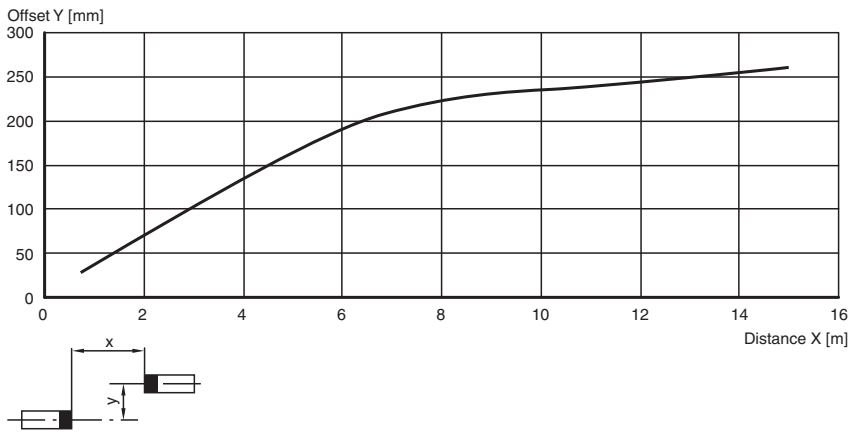


S1/S2: Startup/restart interlock
S3: Beam coding

Terminal	Emitter	Receiver SLC...-R (semiconductor output)	Receiver SLC...-R/129 (Relay monitor)
X1:1	Functional earth	Functional earth	Functional earth
X1:2		Test (input)	Relay monitor
X1:3		0 V OSSD	0 V OSSD
X1:4		24 V OSSD	24 V OSSD
X1:5		OSSD2 (output)	OSSD2 (output)
X1:6		OSSD1 (output)	OSSD1 (output)
X1:7	0 V AC/DC	0 V DC	0 V DC
X1:8	24 V AC/DC	24 V DC	24 V DC
X2:1	Not placed on board	Start release (output)	Start release (output)
X2:2		Status OSSD (output)	Status OSSD (output)
X2:3		n.c.	n.c.
X2:4		n.c.	n.c.
x2:5		Startup readiness (input)	Startup readiness (input)

Characteristic Curve

Characteristic response curve SLC30 / SLC60 / SLC90



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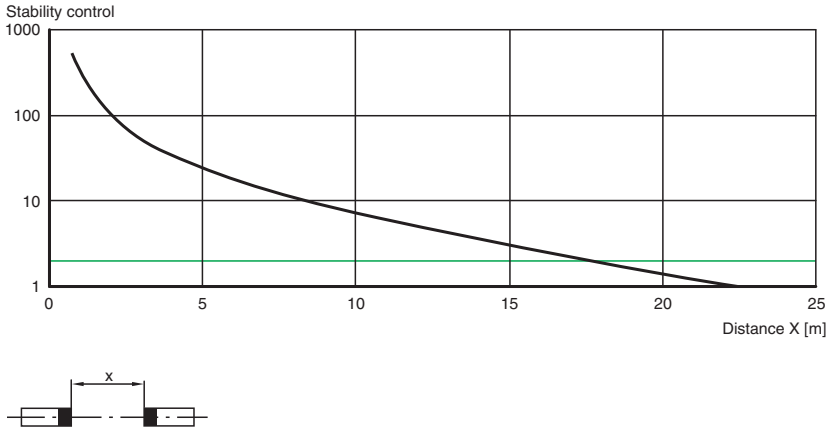
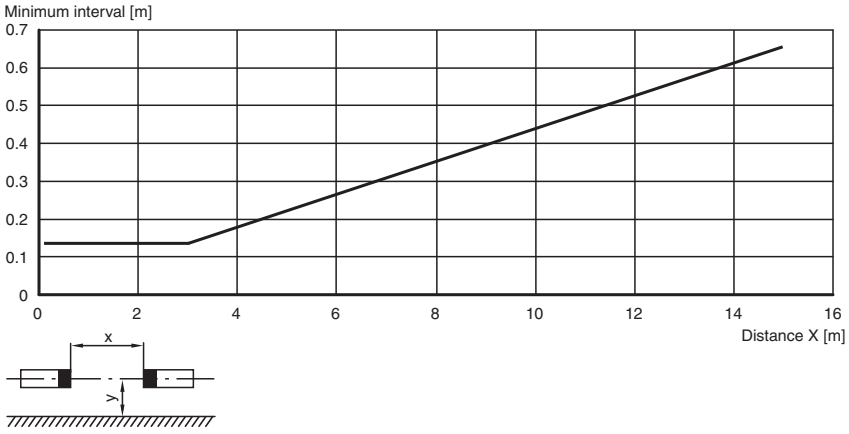
Relative received light strength

SLC30 / SLC60 / SLC90



Lateral interval to mirroring surfaces

SLC30 / SLC60 / SLC90



Matching System Components

	**SB4-OR-4XP-B-4159**	Safety control unit
	**SB4-OR-4XP**	Safety control unit
	**SB4-OR-4XP-B**	SB4 series safety control unit with 1 optional module slot for functional enhancement
	**SB4-OR-4XP-B-B**	SB4 series safety control unit with optional module slots for functional enhancement
	**SB4-OR-4XP-B-B-B**	SB4 series safety control unit with optional module slots for functional enhancement
	**SB4-OR-4XP-B-B-B-B**	SB4 series safety control unit with optional module slots for functional enhancement
	**SB4-OR-4XP-B-B-B-B-B-B**	SB4 series safety control unit with optional module slots for functional enhancement
	**SB4-OR-4XP-B-4158**	Safety control unit
	**SB4-OR-4XP-3819**	Safety control unit

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Matching System Components

	**SB4-OR-4XP-4M**	Safety control unit
	**SB4-OR-4XP-4MD**	Safety control unit
	**SB4-OR-4XP-4M-4136**	Safety control unit of series SB4
	**SB4-OR-4XP-4X**	Safety control unit
	**SB4-OR-4XP-4X-3819**	Safety control unit
	**SB4-OR-4XP-4136**	Safety control unit of series SB4

Accessories

	**PG SLC-900**	Protective glass panes for SLC series

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Notes

Master slave mode

Master: SLC..-... (semiconductor)
or
SLC..-.../31 (relay)
Slave: SLC..-...-S

Using slaves makes it possible to lengthen protective fields or to form protective fields that lie in more than just one level. When you select slaves that can be connected, you should take into consideration that the maximum number of 96 light rays must not be exceeded.
There are slaves for transmitters and receivers. These may simply be connected to the master light curtain. As many as 2 slaves may be connected respectively to the transmitter and receiver unit.

Installation:

1. The end cap should be screwed off for the light curtain (without cable gland).
2. The plug-in jumper on the connectors of the printed circuit board, which is now visible, should be removed.
3. The slave is designed so that the cap located on the cable connector can be plugged directly onto the open end of the light curtain with the printed circuit board.
4. After you have screwed on the connection cap, the system is complete.

System accessories

- Mounting set SLC
- Test rods SLC14/SLC30/SLC60
- Protective glass pieces for SLC (to protect the optically functional surface)
- Lateral screwed connection SLC
- Profile alignment aid
- Laser alignment aid SLC
- Mirror for SLC (for securing hazardous areas on multiple sides)
- Ground pillar UC SLP/SLC
- Housing for pillar
  Enclosure UC SLP/SLC
- Collision protector
  Damping UC SLP/SLC

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